AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (currently amended)   A method for monitoring a performance characteristic of a wheel of a mobile platform, the method comprising:

using rotation of the wheel during operation of the mobile platform to impart motion to an electric current generating device being carried on the wheel, to thus generate an electric current;

using said electric current to power a wheel performance characteristic sensor, that in turn senses a wheel performance characteristic and provides a real time signal indicative of the wheel performance characteristic;

communicating said signal via wireless signals to a receiver located on the mobile platform remotely from the wheel; and

using said wireless signals to communicate to said receiver mapping information and an identity marker used to specifically identifying identify a positional location of said wheel [[from]] within a larger plurality of said wheels, to said receiver by disrupting the wireless signal.

2. (original) The method of claim 1, wherein using rotation of the wheel to impart motion to an electric current generating device comprises using rotation of the wheel to impart motion to a permanent magnet generator supported on a hubcap associated with the wheel.

3. (original) The method of claim 1, wherein communicating information specifically identifying said wheel comprises communicating information identifying a position of said wheel to thus associate said position of said wheel with said wheel performance characteristic.

4. (original) The method of claim 1, further comprising storing the information identifying said wheel in said receiver.

5. (original) The method of claim 1, further comprising storing the information identifying said wheel on a device in communication with said receiver.

6. (original) The method of claim 1, further comprising displaying the wheel performance characteristic on a display viewable by an operator of the mobile platform.

7. (original) The method of claim 1, further comprising displaying the information identifying said wheel and said wheel performance characteristic on a display viewable by an operator of the mobile platform.

8. (currently amended) A method for mapping and monitoring aircraft landing gear systems, said method comprising:

using the rotation of [[an]] a subject aircraft landing gear wheel to drive a permanent magnet generator (PMG) mounted to a hubcap coupled to the subject landing gear wheel;

operating a wheel speed sensor, mounted to the hubcap, using a current output by the PMG;

communicating subject landing gear wheel rotational speed data, provided by the wheel speed sensor, to at least one remotely located transceiver using wireless signals;

acquiring mapping data and an identity marker used to identify pertaining to a positional location of the subject landing gear wheel a hubcap transceiver coupled to the hubcap with respect to other landing gear wheels within the landing gear utilizing by disrupting the wireless signal communicated to the remotely located transceiver; and

storing the mapping data and the identity marker in the remotely located transceiver.

9. (original) The method of Claim 8, wherein operating the wheel speed sensor using the current from the PMG comprises:

inputting the current output by the PMG to a power supply mounted to the hubcap; and

providing power output by the power supply to the wheel speed sensor and a hubcap transceiver mounted to the hubcap.

10. (original) The method of Claim 9 wherein providing power comprises utilizing power stored in at least one of a super-capacitor included in the power supply and a battery included in the power supply.

11. (currently amended) The method of Claim 9, wherein communicating subject landing gear wheel rotational speed data comprises:

communicating subject landing gear wheel speed data provided by the wheel speed sensor to the hubcap transceiver; and

using wireless signals to transmit the subject landing gear wheel speed data from the hubcap transceiver to the remotely located transceiver.

12. (currently amended) The method of Claim 9, wherein said method further comprises:

communicating subject tire pressure data, provided by a tire pressure sensor mounted to the subject landing gear wheel, to the hubcap transceiver; and

using wireless signals to transmit the subject tire pressure data from the hubcap transceiver to the remotely located transceiver.

13. (currently amended) The method of Claim 12, wherein communicating subject tire pressure data comprises operating the tire pressure sensor using as a power source at least one of a carrier wave transmitted by the hubcap transceiver and a battery included in the tire pressure sensor.

14. (currently amended) The method of Claim 8, wherein the method further comprises:

displaying a schematic illustrating all the landing gear wheels the mapping data on a maintenance display terminal such that , and;

showing the positional location of the hubcap transceiver is illustrated subject landing gear wheel within the illustrated schematic.

15. (currently amended) The method of Claim 8, wherein the method further comprises displaying the subject landing gear wheel rotational speed data on a maintenance display terminal.

16. (currently amended) A method for mapping a location within an aircraft landing gear for each of a plurality of wireless landing gear monitoring systems, said method comprising:

mounting a hubcap transceiver included in each monitoring system to a respective one of a plurality of landing gear wheel hubcaps;

transmitting a wireless signal including a marker signal from the hubcap transceiver to at least one of a plurality of distant transceivers coupled to the aircraft;

acquiring mapping data pertaining to a positional location of at least one of the hubcap transceivers by activating a mapping command utilizing a maintenance display terminal, using the maintenance display terminal to select a specific landing gear monitoring system to be mapped and disrupting the wireless signal transmitted from the hubcap transceiver of the landing gear monitoring system selected to be mapped; and

displaying the mapping data on [[a]] the maintenance display terminal such that the positional location of the hubcap transceiver is illustrated.

17. through 19. (cancelled)

20. (currently amended) The method of Claim 19, wherein disrupting the wireless signal includes blocking the transmission of the wireless signal to the distant transceiver.

21. (original) The method of Claim 19, wherein acquiring mapping data further includes identifying the disrupted wireless signal using the distant transceiver.

22. (original) The method of Claim 21, wherein acquiring mapping data further includes correlating the identified disrupted wireless signal and associated marker signal to the landing gear monitoring system selected to be mapped and storing data expressing the correlation in the distant transceiver.

23. (original) The method of Claim 22, wherein acquiring mapping data further includes transmitting the correlation data from the distant transceiver to the maintenance display terminal.

24. (original) The method of Claim 23 wherein acquiring mapping data further includes transmitting the correlation data from the distant transceiver to at least one other distant transceiver and storing the information in the other distant transceiver.

25. (original) The method of Claim 16, wherein the method further includes monitoring the operational status of the landing gear wheel associated with the selected monitoring system, via the maintenance display terminal.

26. through 29. (cancelled)

30. (original)   A method for mapping a location within an aircraft landing gear for each of a plurality of wireless landing gear monitoring systems, wherein each monitoring system is carried on a respective one of a plurality of landing gear wheel hubcaps, said method comprising:

transmitting a wireless signal including a marker signal from a hubcap transceiver included in each monitoring system to at least one of a plurality of remote transceivers coupled to the aircraft, wherein each marker signal contains a signal characteristic unique to the respective monitoring system from which it is transmitted;

activating a mapping command at a maintenance display terminal adapted to communicate with each remote transceiver;

selecting, using the maintenance display terminal, a specific landing gear monitoring system to be mapped;

disrupting the wireless signal transmitted from the hubcap transceiver of the landing gear monitoring system selected to be mapped;

identifying the disrupted wireless signal using the remote transceiver;

correlating the identified disrupted wireless signal and associated marker signal to the landing gear monitoring system selected to be mapped and storing data expressing the correlation in the remote transceiver;

transmitting the correlation data from the remote transceiver to the maintenance display terminal;

transmitting the correlation data from the remote transceiver to at least one other remote transceiver and storing the information in the other remote transceiver; and

monitoring the operational status of the landing gear wheel associated with the selected monitoring system, via the maintenance display terminal.